

The Gentleman's and Builder's
DIRECTOR:

OR, A

1401. c. 43

K E Y

That openeth to your Sight at once,

BRICK WORK

Ready reduced to your Hands,

OF ANY

*Number, Feet, or Thickness, from
1 FOOT to 4624 FEET, and so
on, ad Infinitum.*

By EDWARD ROMAN, *Bricklayer.*

THE SECOND EDITION.

L O N D O N:

Printed for H. CURLL, in *Burghley-
Street, in the Strand.* 1734.

(Price 6 d.)

The Gentleman's and Builder's

DIRECTOR

K E Y

BRICK WORK



43.

10.

9.

147.



THE
Gentleman's and Builder's
DIRECTOR, &c.

GENTLEMEN,



YOU have here a KEY which unlocketh at once the reducing of BRICK WORK, so useful to all who have any Occasion for, or desire to attain to, the Knowledge of Measuring of BRICK WORK, reducing any Number of FEET of any Thickness, from 1 Foot to 4624 FEET, how many ROD, Quarters of a ROD, FEET, and INCHES, are contained in any Number of FEET; and performed with 68 Lines or Numbers, as if the 4624 were all down; how many Rod, Quarters of a Rod, Feet,

A 2

and

(4.)

and Inches, are contained in any Sum or Number of Feet, or of any Thickness, as above said.

THIS KEY openeth to you farther, that you may reduce any Number of any Thickness, by Division alone, as you will plainly see appear in the Explanation of the PLATE; or you may take any Sum of Feet or Thickness with your Compasses.

YOU who are ARTISTS, are not all infallible; it is of some Use to you, for proving your own Work by it; or, if Time be short, you may shorten your Work by looking on this Plate, which is designed for publick Good.

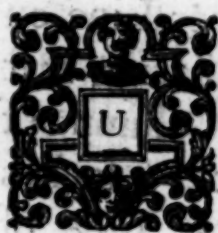
E. R.

Rose-Street,
Covent-Garden,
1705.

N	A	B	C	D	A	B	C	D
68	0	1	2	3	0	1	2	3
136	1	2	3	4	1	2	3	4
204	2	3	4	5	2	3	4	5
272	3	4	5	6	3	4	5	6
340	4	5	6	7	4	5	6	7
408	5	6	7	8	5	6	7	8
476	6	7	8	9	6	7	8	9
544	7	8	9	10	7	8	9	10
612	8	9	10	11	8	9	10	11
680	9	10	11	12	9	10	11	12
748	10	11	12	13	10	11	12	13
816	11	12	13	14	11	12	13	14
884	12	13	14	15	12	13	14	15
952	13	14	15	16	13	14	15	16
1020	14	15	16	17	14	15	16	17
1088	15	16	17	18	15	16	17	18
1156	16	17	18	19	16	17	18	19
1224	17	18	19	20	17	18	19	20
1292	18	19	20	21	18	19	20	21
1360	19	20	21	22	19	20	21	22
1428	20	21	22	23	20	21	22	23
1496	21	22	23	24	21	22	23	24
1564	22	23	24	25	22	23	24	25
1632	23	24	25	26	23	24	25	26
1700	24	25	26	27	24	25	26	27
1768	25	26	27	28	25	26	27	28
1836	26	27	28	29	26	27	28	29
1904	27	28	29	30	27	28	29	30
1972	28	29	30	31	28	29	30	31
2040	29	30	31	32	29	30	31	32
2108	30	31	32	33	30	31	32	33
2176	31	32	33	34	31	32	33	34
2244	32	33	34	35	32	33	34	35
2312	33	34	35	36	33	34	35	36
2380	34	35	36	37	34	35	36	37
2448	35	36	37	38	35	36	37	38
2516	36	37	38	39	36	37	38	39
2584	37	38	39	40	37	38	39	40
2652	38	39	40	41	38	39	40	41
2720	39	40	41	42	39	40	41	42
2788	40	41	42	43	40	41	42	43
2856	41	42	43	44	41	42	43	44
2924	42	43	44	45	42	43	44	45
2992	43	44	45	46	43	44	45	46
3060	44	45	46	47	44	45	46	47
3128	45	46	47	48	45	46	47	48
3196	46	47	48	49	46	47	48	49
3264	47	48	49	50	47	48	49	50
3332	48	49	50	51	48	49	50	51
3400	49	50	51	52	49	50	51	52
3468	50	51	52	53	50	51	52	53
3536	51	52	53	54	51	52	53	54
3604	52	53	54	55	52	53	54	55
3672	53	54	55	56	53	54	55	56
3740	54	55	56	57	54	55	56	57
3808	55	56	57	58	55	56	57	58
3876	56	57	58	59	56	57	58	59
3944	57	58	59	60	57	58	59	60
4012	58	59	60	61	58	59	60	61
4080	59	60	61	62	59	60	61	62
4148	60	61	62	63	60	61	62	63
4216	61	62	63	64	61	62	63	64
4284	62	63	64	65	62	63	64	65
4352	63	64	65	66	63	64	65	66
4420	64	65	66	67	64	65	66	67
4488	65	66	67	68	65	66	67	68
4556	66	67	68	69	66	67	68	69
4624	67	68	69	70	67	68	69	70



THE
EXPLANATION
OF THE
PLATE.



UNDER F, on the Right Hand, you have *Feet* reduced, marked on the Top of the Columns A, B, C, D. The Column under B is *Feet*, from 1 *Foot* at the Top, to 2, 3, 4, 5, 6, 7, 8, 9, 10 *Feet* down, and to 68 *Feet* in the lower Line.

Under A *one* Brick, in the other Line, you have 45 Feet 4 Inches. Under C *two* Bricks, 90 Feet 8 Inches; and under D *two* Bricks and *half*, you have 113 Feet 4 Inches. In the upper Line, under B *one* Foot,
under

under A 8 Inches, under C *one* Foot 4 Inches, and under D *one* Foot 8 Inches, any Number at a Brick and half thick, is reduced; so any Number you would reduce, look for the Number you would have under B, a Brick and half. Suppose the Number were 14 *Feet*, against it you will find under A 9 *Feet* 4 *Inches*, and C 18 *Feet* 8 *Inches*, under D 23 *Feet* 4 *Inches*; so any other Number. These *Feet* and *Inches* in the Line below, remove to the upper Line on the Left Hand under R, placing first 68 *Feet* under N the Column of Numbers, then take 45 *Feet* 4 *Inches* from under A in the lower Line of the *Feet* reduced, and place it in the upper Line under A, against 68 in the Line of Numbers N; then take 68 from under B in the lower Line, and place under B in the upper Line, against 68, under N, calling it *one* Quarter, as it is so set down under B; then take 90 *Feet* 8 *Inches* from under C in the lower Line, placing
it

it under C in the upper Line, calling it *one Quarter 22 Feet 8 Inches*; set down under C *22 Feet 8 Inches*; then take *113 Feet 4 Inches* from under D in the lower Line, and place under D in the upper Line, calling it, as it is, *one Quarter 45 Feet 4 Inches*; thus set down, 1 : 454 D. Now to N, in the Column of Numbers, as 68 : 136 : 204 : 272 : and so down to 4624 Feet. Note, That the Column under B, a Brick and half is a single Column of *Rods* and *Quarters* between the *Rods*, which are larger Figures, as you see under B: From one *Quarter* to 17 *Rods* in the lower Line against 4624, and A one Brick, is A 11 *Rod 1 Quarter 22 Feet 8 Inches*, thus set down, 11 *Rods*, 1 *Quarter 22 Feet, 8 Inches*: The *Rods* are above the *Quarters*, *Feet*, and *Inches*, till you come downward to another *Rod* under C *two Bricks* in the lower Line *22 Rod and half, 45 Feet 4 Inches*, and under D *two Bricks and half* is

28 Rods 1 Quarter 22 Feet 8 Inches. Now against 816 Feet in the Column of Numbers, you have under A *one* Brick *two* Rod in a larger Figure than *Quarters*; and B *one* Brick and *half*, you have 3 Rods; and under C 4 Rods; and under D *two* Bricks and *half*, you have 5 Rods, as you see in the Plate. Now if a Sum or Number shall happen, that is not in the Column of Numbers, as 830, you have 816, which is but 14 Feet short; look into the *Feet* reduced under B *one* Brick and *half*, for 14 Feet, under A *one* Brick against it, you have 9 Feet 4 Inches; and under C *two* Bricks, you have 18 Feet 8 Inches; and under *two* Bricks and *half* D, you have 23 Feet 4 Inches. You may add these *Feet* to the *Rods* of their several Thickness; and so of any other Number that is not found in the Column of Numbers.

THUS by the *Feet* reduced, your Answers, with 68 Lines from *one* Foot

Foot to 4624 *Feet* to *two* Bricks and *half* thick, for increasing the Thickness to 5 Bricks or more, if you please, for 3 Bricks add BB; for 3 Bricks and *half* add CB, for *four* Bricks double CC, for 4 Bricks and *half* add CD, for 5 Bricks double DD, what *Feet* you have, that are not in the Line of *Numbers*, you may increase as you have done before. Now, by the Help of the *Feet* reduced, you have, or may, answer all Sums from 1 *Foot* to 4624, which, in a little Time, with Practice, will be for the Good of all who have Occasion for it:

Now followeth the reducing of any Number of *Feet*, of any *Thickness*, by *Division*; as you will hereafter see: *half* a Brick for the *first* Thickness over O, and *one* Brick thick in the same Line over A, and over B you have *one* Brick and *half*; and so of the rest to 5 Bricks, as you will find in the Table herein assigned. Your *Divisor*

B under

under *half* is 816 Feet, as under O your *Divisor* under A for *one* Brick 408, your *Divisor* under B, for *one* Brick and *half*, is 272, and so on to 5 Bricks, as you find the *Quarters*, *Halves*, and 3 *Quarters* are set down under the several *Divisors*; for they are also reduced as you see.

Now if any FEET remain, they are less than *Quarters*, for the *Quarters* take all the Remainder; but what is less than *Feet* reduced, will answer to the several *Thicknesses*, as you have before seen; or you may reduce them thus: If 3, *one* Brick and *half* give me any Sum that remains of a *Quarter*, what will 4 give, being *two* Bricks thick, or 5 give at *two* Bricks and *half* Thick, or 6 give at 3 Bricks, and so on to 10, 5 Bricks thick?

You may, likewise take any Number of *Feet* you desire with your *Compasses*, setting 1 *Foot* at

68 under N extended, the other to the Sum you desire, with the same Distance removed to any *Thicknes* you desire; there you see how many *Rod, Quarter, Feet, Inches*, are contained therein reduced to your Hand.

Thickn.	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5
	O	A	B	C	D	BB	BC	CC	CD	DD
Divisor.	816	408	272	204	163: 3	136	116:7	102	90:8	81: 7
Quart.	204	102	68	51	40:10	34	29:2	25:6	22:8	20: 5
Halfs.	408	204	136	102	81: 8	68	58:4	51: 5	45:4	40:10
3 Quart.	612	306	204	152	122:6	102	87:6	76:6	68:2	61: 3

IF the Number is not in the Column of Numbers, take the nearest short of it, and see what Number of *Feet* you are short, the *Feet* reduced answereth your Desire, as has been seen before.

I HAVE drawn Lines which perform as followeth, any Side of a Cube given, and it is required to give a Side that doubleth the Cube Number of the Side given, not only for doubling the Cube; but if it

be required to give a Side that is 3 Times the Cube Number, or 4, 5, 6, 7, 8, 9, or 10 Times the Cube Number of the given Side: And to prevent Error with the Compasses in taking of these Lines with a Number assigned by me, the Side given being in whole Numbers, with only *Multiplying* of *one* Single Figure, and none above *two*; the Product is the Side required, not only, as I said before, for doubling the Cube Number, but if it is required to give a Side which is 3 Times the Cube Number of the Side given, or 4, 5, 6, 7, 8, 9, or 10 Times, is performed only with the Multiplication of one single Figure, by the Sum, or Number, assigned by me, to 10,000 Parts of *one*, and some increased to 100,000 Parts of *one*, without *Extraction* or *Logarithms*, and with more Speed, Ease, and Certainty. The *Logarithms* must be very large to reach what the Number assigned by me does; being
mul-

multiplied by one single Figure, and never above two ; or, any Error in printing the Logarithms, my Number will prove.

I KNOW some who are well acquainted with Figures, yet they know not the right Way of *Cross-Multiplication*.

4	X	6	
4	X	6	
16		0	
2		0	
2		0	
20		3	

1	1	2	3	4
2	5	6	7	8
3	9	10	11	12
4	13	14	15	16

THIS Table will Demonstrate the Reason of *Cross-Multiplying*, by Figures, as you see, and the *Dimensions*, we use thus to set them down in Figures ; saying, 4 Feet and half by 4 Feet and half, as I have set down.

THEN

THEN say, 4 Times 4 is 16, and
 set it down here, then *Cross-multiply*,
 and say, 4 *half* Feet is 2 Feet, let-
 ting 2 down under 16: Then *Cross-*
multiply again, and say, 4 *half* Feet
 is 2 Feet, which set down under 16
 to the other 2; then cast them up,
 and it makes 20. Now Multiply
 the Inches by themselves, and say,
 6 Times 6 is 36, as the Angle of
 this Table, or these Lines, which
 are *short* Square Inches: 12 to one,
 long Inches, so that 36 Inches are
 but 3 *long* Inches, as you see both
 by Figures and Lines; for the 3 In-
 ches, or Quarters of a *Foot* in the
Angle, is 6 Inches *Square*, yet make
 but a *Quarter*, which place against
 20 Feet 3 Inches, as you see in the
 Figure. This I have done for their
 Sakes for whom it is intended; and
 those who have not any Occasion,
 need not trouble themselves to peruse
 it: You may, if you think it more
 ready to you, call the Feet *Shillings*,
 and

and the Inches *Pence*, in *Cross-multiply-
ing* ; but in *multiply*ing the Inches
by *themselves*, you must call them
12 to an *Inch*, or 12 to a *Penny* ;
so if any remain under 12, you must
set them down thus, $\frac{6}{12}$ or *half* an
Inch, or $\frac{2}{12}$ 3 *Quarters* of an *Inch*, or
Farthings.

THUS, Gentlemen, wishing you
much Success with your *Practice* (for
there is *little* without *some Practice*)
I bid your Farewel.

F I N I S.



Two BOOKS, Written by the late
Honourable ROGER NORTH, Esq;
of *Rougham*, in the County of
Norfolk, viz.

I. **T**HE *Gentleman Accomptant*: or, The
Mystery of *Accompts* unfolded by way of
Debtor and *Creditor*, commonly called *Merchants*
Accompts, applied to the Concerns of the Nobility
and Gentry of *England*, 1. The great Advantage
of Gentlemen's keeping their own *Accompts*,
with Directions to Persons of Quality and For-
tune. 2. The Ruin that attend Men of Estates
by Neglect of *Accompts*. 3. The Usefulness of
the Knowledge of *Accompts*, to such as are any
way employed in the public Affairs of the Nation.
4. Of Banks; those of *Venice* and the *Turky* Com-
pany. 5. Of Stocks and Stock-jobbing; the
Frauds therein detected. 6. A short and easy
Vocabulary of certain Words, that in the Lan-
guage of *Accounting* take a particular Meaning.
Price 3 s.

2. THE *Gentleman Farmer*: or, certain *Obser-*
vations made by an *English* Gentleman upon the
Husbandry of *Flanders*, and the same compared
with that in *England*. Wherein, upon a careful
Examination of the Soils of each *Country*, and
some new Experiments made in our own *Agriculture*,
it is demonstrated, that a *younger Brother*, with
only Five Hundred Pounds a-Year; and so for any
Sum in a less or greater Proportion. Also, a cer-
tain Method of improving Meadow-Grounds,
from Forty Shillings to Six Pounds an Acre, by
Fish Ponds. By a Gentleman in the County of
Norfolk. Price 2 s. 6 d.

Both printed for H. CURLE in the Strand.

